

From: [Sury Vulimiri](#)
To: [David Bussard](#)
Cc: [Danielle DeVoney](#); [Bob Sonawane](#)
Subject: Endogenous formaldehyde
Date: 09/22/2010 10:26 AM
Attachments: [Tong et al 2010 FA Tumor.pdf](#)
[Wiemels et al 2001 MTHFR polymorphisms childhood leukemia.pdf](#)
[Tyihak 2001 FA2514.pdf](#)
[Murrell et al 2005 Stem cells.pdf](#)

Hi David,

Thanks for the wonderful discussion. Here are some papers that we discussed about.



Tong et al 2010 FA Tumor.pdf

Clinical data have shown that formaldehyde concentration is elevated (2,8 fold) in the urine of patients with prostate and bladder cancer [3] and in the expired air from tumor-bearing mice and breast cancer patients [4]; and these patients frequently suffer from bone cancer pain [5,6]. Formaldehyde is considered to be a risk factor of cancer development [7], but for the most part knowledge about formaldehyde secretion by tumor tissue is limited. (Tong et al 2010). Formaldehyde levels are increased in cultured cancer cells as well as cancer tissues.

Polymorphisms in MTHFR gene protect against colon cancer and leukemia (Wiemels et al 2001). The polymorphisms in MTHFR gene cause increased fidelity in DNA synthesis since the enzyme is used in generating thymidine pools.



Wiemels et al 2001 MTHFR polymorphisms childhood leukemia.pdf

Formaldehyde inhibits and stimulates cell proliferation depending on the concentration (Tyihak 2001).



Tyihak 2001 FA2514.pdf

Multipotent cells from adult olfactory mucosa (human and rodents) are shown to transigrate to bonemarrow (Murrell et al 2005)



Murrell et al 2005 Stem cells.pdf

Sury